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Chris L. Stone

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Lipsitz & McAllister, LLC
755 MAIN STREET
MONROE, CT 06468

EXAMINER

DUFFIELD, JEREMY S

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/600,081	Applicant(s) STONE ET AL.	
	Examiner JEREMY DUFFIELD	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7, 10-40 and 42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7, 10-40 and 42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>23 October 2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 2, 5-7, 10, 17, 20, 21, 23-25, 32, and 34-37 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 2 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Alattar (US 7,020,304).

Regarding claim 2, Alattar teaches a method of tracking a broadcast program, comprising: inserting a unique watermark value into a program to be broadcast (Col. 5, lines 59-63);

deriving a fingerprint value based on said program's content (Col. 20, lines 15-17);

storing said program's watermark value and associated fingerprint value (Col. 10, lines 10-18; Col. 20, lines 50-54);

detecting any watermark value inserted in a given broadcast program (Col. 1, lines 29-39; Col. 3, lines 10-17; Col. 8, lines 24-28; Col. 20, lines 46-51);

deriving a fingerprint value based on said given broadcast program's content (Col. 20, lines 15-17); and

comparing any detected watermark value and derived fingerprint value from said given broadcast program with said stored watermark and associated fingerprint values, i.e. server looks up corresponding fingerprint in a database, Note: a watermark value, according to Alattar, not only serves as a calibration signal but also includes identifiers, that relate the identifiers from the watermark to corresponding identifiers in a database that has additional information to identify the content owner and/or distributor (Col. 10, lines 10-37; Col. 20, lines 49-55).

Regarding claim 4, Alattar teaches said program to be broadcast has an associated embedded audio data stream (Col. 2, lines 7-10 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar); and

said unique watermark is encoded into the bits of said program's embedded audio data stream, i.e. tag in a file header (Col. 3, lines 55-57 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-7, 10-14, 17-38, 40, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alattar in view of Brunk (US 7,289,643).

Regarding claim 5, Alattar teaches creating a database in which the unique watermarks and their associated derived fingerprint values for a plurality of unique programs to be broadcast are stored (Col. 10, lines 10-18; Col. 20, 50-54); and

registering the unique watermark and associated derived fingerprint value for said program to be broadcast in said database (Col. 20, lines 50-54), (Col. 4, lines 1-19 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar);

comparing said watermark detected in said given broadcast program with the watermarks stored in said database (Col. 10, lines 10-18).

Alattar does not clearly teach when said database contains a stored watermark which matches said detected watermark, cross-checking said fingerprint value derived from said given broadcast program with the stored fingerprint value associated with said stored watermark.

Brunk, explicitly incorporated by reference in Alattar (Col 20, Lines 26-35) teaches a watermark containing a content signature, i.e. a watermark is sent to a database and is matched to another watermark which contains owner information

then, forwarding the content signature to the owner's database where it is matched to song information (Col. 7, lines 4-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Alattar's comparing process to include cross-checking said fingerprint value derived from said given broadcast program with the stored fingerprint value associated with said stored watermark when said database contains a stored watermark which matches said detected watermark, as taught by Brunk, for the purpose of providing an extra layer of security to a media content and to provide a content verification tool.

Regarding claim 6, Alattar in view of Brunk teaches reporting the results of said cross-checking to a registrant of said program to be broadcast, i.e. data is determined to be authentic or modified; user is presented with all matches (Brunk-Col. 6, lines 39-52; Col. 9, lines 33-37; Col. 12, lines 34-48).

Regarding claim 7, Alattar in view of Brunk teaches comparing said fingerprint value derived from said given broadcast program with all said stored fingerprint values when said fingerprint value derived from said given broadcast program is different than said stored fingerprint value associated with said stored watermark, i.e. recalculated content signature is compared to stored signatures in a database (Brunk-Col. 12, lines 34-48).

Regarding claim 10, Alattar teaches a method for enabling reliable identification of a content comprising:

embedding a watermark value into said content to produce an embedded content (Col. 5, lines 56-63);

generating a fingerprint associated with said content (Col. 20, lines 9-17);

registering information comprising said watermark value, wherein said information can be subsequently used to identify said content (Col. 10, lines 10-18; Col. 4, lines 1-19 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar).

Alattar does not clearly teach registering information comprising said watermark value and said fingerprint.

Brunk teaches embedding a content signature in a watermark and registering a content signature in a database; the watermark and content signature are used to identify a content item (Col. 2, lines 40-65; Col. 6, line 65-Col. 7, line 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Alattar's registering information to include both a watermark and a fingerprint, i.e. content signature, both of which can be used to identify said content, as taught by Brunk, for the purpose of

providing an extra layer of security to a media content and to provide a content verification tool.

Regarding claim 11, Alattar in view of Brunk teaches said fingerprint is generated by analyzing inherent characteristics of the content (Col. 20, lines 9-17).

Regarding claim 12, Alattar in view of Brunk teaches said inherent characteristics comprise at least one of luminance, chroma, gamma, or amplitude levels of the content (Col. 20, lines 9-17).

Regarding claim 13, Alattar in view of Brunk teaches said fingerprint is generated for at least portions of an audio or video component of said signal (Col. 20, lines 9-17).

Regarding claim 14, Alattar in view of Brunk teaches said watermark value is embedded in at least portions of an audio or video component of said content (Col. 5, lines 56-63).

Regarding claim 17, Alattar in view of Brunk teaches receiving information comprising at least said watermark value and said fingerprint at a registration authority (Alattar-Col. 10, lines 10-18; Col. 4, lines 1-19 of US 6,505,160 which is

incorporated by reference from Col. 10, lines 30-36 of Alattar; Brunk-Col. 2, lines 40-65); and

verifying the received information, i.e. verifying that the content is authentic or modified (Brunk-Col. 2, lines 40-65, Col. 6, lines 40-53; Alattar-Col. 10, lines 10-18; Col. 20, lines 49-55).

Regarding claim 18, Alattar in view of Brunk teaches comparing at least one of said watermark value or said fingerprint against a database of registered watermark values and fingerprints (Alattar-Col. 10, lines 10-18; Col. 20, lines 49-55; Brunk-Col. 7, lines 4-30).

Regarding claim 19, Alattar in view of Brunk teaches registering is completed when said comparing produces no matches (Col. 10, lines 29-36 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar).

Regarding claim 20, Alattar in view of Brunk teaches registering is not completed when said comparing produces at least one match (Col. 10, lines 29-36 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar), Note: Examiner equates partially completed registering and not completed.

Regarding claim 21, Alattar in view of Brunk teaches notifying at least one of an applicant or a content owner, i.e. user is presented with all matches (Brunk-Col. 12, lines 34-48), routing the object identifier to a server maintained by a content owner, distributor, etc. (Col. 5, lines 35-50 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar).

Regarding claim 22, Alattar in view of Brunk teaches registering is partially completed when said comparing produces at least one match (Col. 10, lines 29-36 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar), Note: Examiner equates partially completed registering and not completed.

Regarding claim 23, Alattar in view of Brunk teaches contacting at least one of an applicant for registration or a content owner, i.e. routing the object identifier to a server maintained by a content owner, distributor, etc. (Col. 5, lines 35-50; Col. 10, lines 29-36 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar); and

updating said database in accordance with the response(s) of said applicant or said content owner, i.e. content owner uploading the version ID to a central database or creating a new entry in the database when an identifier has

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not been assigned (Alattar-Col. 10, lines 24-30; Col. 10, lines 29-36 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar).

Regarding claim 24, Alattar in view of Brunk teaches receiving additional content identification information (Alattar-Col. 5, lines 59-63; Col. 3, line 65-Col. 4, line 14 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar).

Regarding claim 25, Alattar in view of Brunk teaches said additional content identification information comprises at least one of content title, ownership information, or origination information (Col. 5, lines 59-63; Col. 3, line 65-Col. 4, line 14 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar).

Regarding claim 26, claim is analyzed with respect to claim 18.

Regarding claim 27, claim is analyzed with respect to claim 19.

Regarding claim 28, claim is analyzed with respect to claim 20.

Regarding claim 29, claim is analyzed with respect to claim 21.

Regarding claim 30, claim is analyzed with respect to claim 22.

Regarding claim 31, claim is analyzed with respect to claim 23.

Regarding claim 32, Alattar teaches a method for enabling identification of a received content comprising: generating a fingerprint associated with said received content (Col. 20, lines 15-17);

analyzing said received content to discern the presence of embedded watermarks (Col. 1, lines 29-39; Col. 3, lines 10-17; Col. 8, lines 24-28; Col. 20, lines 46-51); and

Alattar does not clearly teach identifying said received content utilizing said fingerprint and said analyzing.

Brunk teaches a watermark containing a content signature, i.e. fingerprint is sent to a database and is matched to another watermark which contains owner information, (Col. 7, lines 4-30), then once matched, forwarding the content signature to the owner's database where it is matched to song information.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Alattar to include identifying received content utilizing the fingerprint and the analyzing to detect the presence of embedded watermarks, as taught by Brunk, for the purpose of providing an extra layer of security to a media content and to provide a content verification tool.

Regarding claim 33, Alattar in view of Brunk teaches identifying is based on additional information stored in a registration database, i.e. version number stored in a system (Col. 9, lines 14-21).

Regarding claim 34, Alattar in view of Brunk teaches no watermarks are detected as a result of said analyzing (Col. 10, lines 26-35 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar);

said identifying comprises comparing said fingerprint with a database of registered fingerprints (Alattar-Col. 20, lines 50-55; Brunk-Col. 12, lines 34-47);
and

if a match is discovered, reporting the reception of a registered content, i.e. presenting the user with the content signature matches (Brunk-Col. 12, lines 34-47).

Regarding claim 35, Alattar in view of Brunk teaches no watermarks are detected as a result of said analyzing (Col. 10, lines 26-35 of US 6,505,160 which is incorporated by reference from Col. 10, lines 30-36 of Alattar);

said identifying comprises comparing said fingerprint with a database of registered fingerprints (Alattar-Col. 20, lines 50-55; Brunk-Col. 12, lines 34-47); and

if no matches are discovered, reporting the reception of an unregistered content, i.e. comparing the content signature with a database of registered content signatures and not returning any matches (Brunk-Col. 12, lines 34-47).

Regarding claim 36, Alattar in view of Brunk teaches at least one watermark is detected as a result of said analyzing (Alattar-Col. 1, lines 29-39; Col. 3, lines 10-17; Col. 8, lines 24-28; Col. 20, lines 46-51; Brunk-Col. 2, lines 10-33); and

the detected watermark and said fingerprint are combined to uniquely identify said received content (Alattar-Col. 20, lines 25-29; Brunk- Col. 2, lines 10-33; Col. 6, line 65-Col. 7, line 3).

Regarding claim 37, Alattar teaches at least one watermark value is detected as a result of said analyzing (Alattar-Col. 1, lines 29-39; Col. 3, lines 10-17; Col. 8, lines 24-28; Col. 20, lines 46-51; Brunk-Col. 2, lines 10-33);

said identifying comprises comparing the detected watermark value with a database of registered watermark values (Alattar-Col. 20, lines 50-55; Brunk-Col. 12, lines 34-47); and

if the detected watermark value matches a registered watermark value from the database, said fingerprint is compared with a database of registered fingerprints, i.e. a watermark is sent to a database and is matched to a registered watermark which contains owner information then forwarding the content signature to the owner's database where it is matched to the registered content signature and song information (Brunk-Col. 7, lines 4-30); and

matching a content signature with a registered content signature (Alattar-Col. 20, lines 38-59; Brunk-Col. 1, lines 50-65; Col. 5, lines 1-26; Col. 6, lines 14-33);

comparing a watermark with a content signature to determine if the content is authentic or modified (Brunk-Col. 6, lines 39-53; Col. 7, lines 4-30),
Note: the watermark and the content signature have to have identification information present in order to determine whether or not they match.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Alattar in view of Brunk to compare a first identification information associated with a watermark value with a second identification information associated with a fingerprint to assess the status of a received content if the fingerprint matches a registered fingerprint from a

database, by matching a content signature with a registered content signature, as taught by Brunk and Alattar, and then proceeding to comparing a watermark with a content signature to determine if the content is authentic or modified, as taught by Brunk, for the purpose of providing an extra layer of security to a media content and to provide a content verification tool.

Regarding claim 38, Alattar in view of Brunk teaches an agreement between said first and second identification information indicates the reception of a properly registered content, i.e. content is authentic (Brunk-Col. 6, lines 39-53; Col. 7, lines 4-30).

Regarding claim 40, Alattar in view of Brunk teaches a conflict between said first and second identification information indicates the reception of an improperly registered content or an altered content, i.e. content is modified (Brunk-Col. 6, lines 39-53; Col. 7, lines 4-30).

Regarding claim 42, Alattar in view of Brunk teaches cryptographic techniques are employed to ensure secure communications with said database, i.e. using private keys for accessing a private database (Alattar-Col. 12, lines 49-63; Brunk-Col. 7, lines 29-50).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alattar in view of Baker (US 6,912,010).

Regarding claim 3, Alattar teaches all elements of claim 2.

Alattar does not teach said unique watermark value is written into the user bits of said program's SMPTE time code.

Baker teaches a source ID is written into the user bits of the program's SMPTE time code (Col. 1, lines 44-48; Col. 2, lines 20-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Alattar's watermark embedding technique to include writing the watermark value into the user bits of a vertical interval time code for the purpose of saving program signal bandwidth.

6. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alattar in view of Brunk and further in view of Baker.

Regarding claim 15, Alattar in view of Brunk teaches all elements of claim 10.

Alattar in view of Brunk does not teach a source ID is inserted into an auxiliary information area of said content.

Baker teaches said watermark value is inserted into an auxiliary information area of said content (Col. 1, lines 44-48; Col. 2, lines 20-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Alattar in view of Brunk's watermark

embedding technique to include writing the watermark value into the user bits of a vertical interval time code for the purpose of saving program signal bandwidth.

Regarding claim 16, Alattar in view of Brunk and further in view of Baker (Col. 1, lines 44-48) teaches said auxiliary information area is reserved for an SMPTE time code.

7. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alattar in view of Brunk and further in view of Zhao (US 6,487,301).

Regarding claim 39, Alattar in view of Brunk teaches all elements of claims 32 and 37.

Alattar in view of Brunk teaches in the event of a conflict between said first and second identification information the content is considered to be modified (Brunk-Col. 6, lines 39-53; Col. 7, lines 4-30).

Alattar in view of Brunk does not clearly teach issuing a report.

Zhao teaches sending an indication of whether content is authentic or modified to the source of the content (Col. 16, lines 36-55; Col. 17, lines 22-57; Col. 18, lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Alattar in view of Brunk to include issuing a report in the event of a conflict between an identification information in

a watermark and identification information in a fingerprint, as taught by Zhao, so as to enable an owner to pursue a copyright infringement violator (Zhao-Col. 3, lines 4-30).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMY DUFFIELD whose telephone number is (571)270-1643. The examiner can normally be reached on Mon.-Thurs. 8:00 A.M.-5:30 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Scott Beliveau/
Supervisory Patent Examiner, Art Unit 2623